



CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for
Environmental Law & Policy

By electronic and regular mail

February 7, 2013

Stephen R. Oliver
US Entity Coordinator-BPA

David Ponganis
US Entity Coordinator—Army Corps of Engineers
Portland, OR 97293
treatyreview@bpa.gov

Re: Comments of the Center for Environmental Law and Policy on the Content and Direction of the Columbia River Treaty Post 2024

Dear Messrs. Oliver and Ponganis:

The Center for Environmental Law and Policy (CELP) thanks you for this opportunity to provide input on how the scope of the 2024 Columbia River Treaty should be expanded to meet present and future needs of the Pacific Northwest in managing and restoring the Columbia River. CELP is very concerned that Canada and the United States will enter into a future treaty that gives short shrift to the goal of restoring ecosystem function. Ecosystem restoration cannot mean what it has historically: attempted compliance with the Endangered Species Act. That will not suffice for the future survival of the Columbia River ecosystem given the certain impacts of climate change on the basin. As explained in greater detail below, CELP urges the US Entity to adopt the following priorities for the future Treaty: 1) planning for and responding to climate change, 2) defining and restoring ecosystem function, and 3) balancing future water supply and demand.

However, before specifically addressing these priorities, CELP wishes to underscore that climate change is not only the most critical issue for the Columbia River and a renewed Treaty, but the biggest challenge immediately impacting the studies of the US Entity. To date, much of the modeling work of the US Entity to predict future conditions has been based upon past hydrological data. However, climate change scientists increasingly repudiate assessment of future conditions based upon stationary data.¹ To protect the Columbia River basin, and its residents and beneficiaries throughout in the greater Northwest (including Canada as well as the United States), US Entity must integrate the best available climate change data into its modeling work, additionally employ the precautionary principle in projecting the future river function and water supply because anticipating the impacts of climate change is inherently uncertain.

¹ PCD Milly et al, *Stationarity is Dead: Whither Water Management?* SCIENCE, 319:573-74 (200*)

BOARD OF DIRECTORS: Anne Johnson / Samantha Mace / David L. Monthie
Bartlett Naylor / Sally Wolf / John Osborn MD

HONORARY BOARD: Billy Frank Jr. / Prof. Estella Leopold / Gov. Mike Lowry / Prof. Charles Wilkinson / Fran Wood MD
911 Western Ave. #305 Seattle, WA 98104 / contact@celp.org / 206-829-8366 / www.celp.org

Priority One: Climate Change²

Climate scientists have done extensive work projecting how climate change will impact the Columbia River basin. Growing consensus points to particularly devastating impacts south of the Canadian border.³ Higher winter temperatures will cause precipitation to fall as rain rather than snow in the Cascades, increasing winter streamflow, and leaving less water stored to supply summertime runoff which contributes to streamflow and groundwater that feeds the Columbia River. Higher temperatures also shorten winters, increasing the length of time between snowmelt and fall rains.⁴ Higher summertime temperatures will increase demand simply to supply existing crop production in the Columbia basin due to increased evapotranspiration.⁵

Current management of the Columbia River balances hydropower generation, flood control, irrigation supply, industrial and domestic supply, and water for endangered and threatened fish. The impacts of climate change, according to projections, will fall heaviest on water resource uses that depend upon summer flow in the Columbia and its tributaries: instream flow for fish, irrigation, urban water supply, summer hydropower production and recreational uses.⁶

Indeed, for hydropower generation, flood control, irrigation and fish requirements in the Snake and the Mainstem Columbia, the University of Washington's Climate Impacts Group estimated the reliability of meeting the production objective for each use from the present to 2040.⁷ Climate change had negligible impacts on flood control and power production. By contrast, reliability declined in 2040 for those uses, irrigation, and salmon returns in the mainstem and, especially the Snake River, that already go unmet.⁸

In sum, climate change will change the timing and quantity of water supply. The US Entity must integrate the best available science into its recommendations. But climate change science is changing as fast as the climate itself. Any new Treaty must provide highly adaptive mechanisms for incorporating better data and improved models for the benefit of managing water infrastructure and river operations. The future of every current use of the river, from hydropower generation to salmon production, depends upon full-implementation of such mechanisms

Priority Two: Ecosystem Restoration

The original treaty focused solely on hydropower generation and flood control, and utterly disregarded the livelihoods and culture of native people. Further destruction of the Columbia

River fishery and ecosystem ensued. That moral debt must be repaid, and to the extent it can be, the benefits will inure to all future generations.

² The impact of climate change on the future of the Columbia River basin and the treaty cannot be overstated. It will alter all current uses of the river. This letter only touches on the impacts, and is based upon the full-fledged analysis in Osborn, Rachael Paschal, *Climate Change and the Columbia River Treaty*, Washington Journal of Environmental Law & Policy, Vol. 2, Issue 1. June 2012, pp. 75-124.

³, Dr. Alan Hamlet, Effects of Climate Change on Water Resources in the Pacific Northwest: Impacts and Policy Implications, JISAO Climate Impacts Group, University of Washington (July 2001)

⁴ *Id.*

⁵ Nazy, Dave, *Climate Change Technical and Legal Challenges*, (powerpoint) Washington State Department of Ecology (2011)

⁶ *Supra* at 3.

⁷ *Supra* at 3.

⁸ *Supra* at 3.

CELP applauds the addition of restoring ecosystem function to the US Entity's iterative assessments of future treaty options. However, to entertain a slim hope of meeting that goal requires broader planning than has occurred thus far. The modeling in Iteration 1 was limited to (1) providing 1 million acre-feet of water to augment streamflow for salmon migration and (2) fulfillment of ESA Biological Opinion requirements. While certainly important, both options are already in play (if not required by law). Restoration of ecosystem function must be considered more broadly. Renegotiation of the Treaty presents a rare opportunity to coordinate restoration of the entire Columbia Basin. The recommendations of the US Entity must go beyond adjustments to the status quo, and consider near and long term coordinated plans to restore and even open up fish habitat throughout the basin.

If wild salmon are to be saved, the US Entity must explore returning salmon to now closed habitats, in addition to restoring currently used habitats. The roughly 400 Columbia Basin dams, spread throughout Canada, Washington, Idaho, Montana, and Oregon, are owned by a variety of provincial, federal, tribal, and municipal agencies, county public utility districts, and private hydropower corporations. They collectively exert a tremendous influence on the river's ecosystem. Real ecosystem restoration requires that the US Entity spearhead a comprehensive study, coordinated with local jurisdictions in greater Columbia River basin, to identify and rank currently blocked or impaired tributaries that can be opened up to fish and other wildlife. Examples include Icicle Creek and the Similkameen River. That examination should also zero in on low-producing, or near retirement dams that, if removed, could open up fish passage to productive habitat. And the assessment should consider all options for returning salmon to the Upper Columbia River basin, above Grand Coulee Dam. Much damage to the ecosystem was wrought in the fifty years of Treaty operation. With creative, near and long term planning, much improvement could occur in the fifty years following a 2024 Treaty to comprehensively restore the river's ecosystem.

To do otherwise in the face of climate change will seal the extinction of Columbia River salmon due to future elevated tributary temperatures that will prove lethal to salmon.⁹. The pressures of climate change may push many species of salmon to near extinction. To prevent that disaster, the US Entity must help identify all useable habitat in the upper watersheds for salmon, and other wildlife.

Priority Three: Rebalancing Water Supply and Demand

The Columbia River is over-appropriated. Food security and domestic water supplies for growing populations are critical issues. Unfortunately, existing shortages coupled with the specter of climate change is creating a "run on water." One example is the plan to pump Columbia River water across Washington State to replenish declining groundwater supplies in the Odessa subbasin. Overconsumption of water for water-hungry crops, like potatoes, that are plainly not sustainable in the Odessa means that water must be pumped from wells as deep as 2,400 feet. Water pumped from such depths is polluted; it is hot and replete with salt. Moreover, simply pumping it to the surface demands a huge amount of energy. Although plainly unsustainable, politics being what they are, the Washington State and the Bureau of Reclamation

plan to pipe Columbia River to 140,000 thirsty acres in the Odessa subbasin, a major expansion of the Columbia Basin Irrigation Project.

⁹ Mantua, *et al*, *Impacts of Climate Change on Key Aspects of Freshwater Salmon Habitat* 227-32, in University of Washington, Climate Impacts Group, Washington Climate Change Impacts Assessment (2009). <http://cses.washington.edu/db/pdf/wacciach6salmon649.pdf>

Predictably, water for the Odessa project would come from the Columbia River. But, the Columbia River has no more water to give. Years ago, the National Academies of Science recommended that the Department of Ecology stop new water diversions from the Columbia River.¹⁰ Unfortunately that has not happened.

Nor is the Odessa proposal is not unique. Throughout the Northwest other potential claims are being made on Columbia River water—those out of river claims will ultimately impact the US Entity operations of the Columbia under a newly configured treaty.

Insufficient water supply in the Columbia Basin currently impacts Columbia River flows. Climate change will only magnify those impacts in the forthcoming decades. In its preparatory work for the State Department, the US Entity simply cannot ignore these future diversions which will, if constructed, deplete future flows in the Columbia River, and impact Treaty operations. A holistic strategy for keeping water instream, and rethinking agricultural patterns in the basin is required.

Conclusion

The looming impacts of climate change argue for the U.S. and Canada to formulate a new treaty to manage the waters of the Columbia River basin. There is too much at stake to allow otherwise. The 2024 Treaty needs to be more flexible than the original, given the variable hydrology that climate scientists project, and uncertainties about future projections. It should also serve as a platform for comprehensive planning to restore the ecosystem of the entire basin. Current work on the 2024 Treaty must also recognize the increased consumptive demand for water throughout the basin, and consider measures to protect current and future flows in the River.

Very truly yours,



Suzanne Skinner
Executive Director

¹⁰ National Academy of Sciences, *Managing the Columbia River, Instream Flows, Water Withdrawals and Salmon Survival*. (2004)